MONASH University

MALAYSIA

SCIENCE

COURSE GUIDE 2026

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COURSE INFORMATION FAST FACTS

Look for these icons on each course page for key information.

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Professionally accredited	
Industrial training	

THE WORLD NEEDS YOU

We're facing a wide range of complex challenges with serious implications - environmental pressures, climate change, a growing population and an ever-changing technological, economic and social landscape. Our future depends on bright minds, innovators, and collaborators who can create solutions for a better tomorrow.

Where does Science come in?

Science is about understanding how the world works. It's about observing, analysing, experimenting and making discoveries. It's about driving change.

A Monash Science degree opens doors to endless possibilities and gives you the power to make your mark on the future.

In 2025, while working as a research assistant under Monash's leading entomologist, Dr Wan Faridah Akmal Jusoh (right), Master of Science student Tan Wei Jack (left) rediscovered the rare Gombak bent-winged firefly *(Pteroptyx gombakia)* in Bukit Kiara, more than a century after its last confirmed sighting.

This find marks only the third known specimen and the first live sighting of this species, last collected in the 1930s.

WHY STUDY SCIENCE AT MONASH

TOP 100 IN THE WORLD[1]

Your degree will be recognised wherever you want to work or study in the world. Monash University is ranked:

- #36 in the world by QS World University Rankings 2026
- #32 in the world for Anatomy and Physiology
- #34 in the world for Life Sciences and Medicine
- #57 in the world for Chemistry
- #68 in the world for Biological Sciences
- #69 in the world for Environmental Sciences

INTERNATIONAL STANDARDS

Our science courses have a strong regional focus with a global perspective. Many of our units are identical to those offered at the Clayton campus and are in disciplines where there is a demand for quality graduates in Malaysia and beyond.

We are committed to student experience and graduate employability, and consistently strive to cultivate a nurturing and interactive atmosphere.

CHOOSE FROM DIVERSE SPECIALISATIONS

Our degrees offer flexibility and choice. You can choose from a wide range of specialisations, from applied microbiology, medicinal chemistry, to tropical environmental biology – all taught by academics who are leaders in their scientific disciplines. You'll develop academically and personally in a dynamic and stimulating environment, and have access to exceptional facilities.

RESEARCH-LED TEACHING

We advocate research-led learning, where classroom theories intersect with cutting-edge research. By merging education and research, we expose our students to the forefront of scientific inquiry. This approach doesn't just create graduates; it nurtures visionaries armed with the tools to shape the world.

INSPIRING ENVIRONMENTS

Innovation thrives in conducive environments. From cutting-edge laboratories in medical bioscience to technological hubs in food science, our facilities foster collaboration, experimentation, and the pursuit of new frontiers. Researchers at our Malaysian campus will have easy access to the infrastructure at the Australian campuses.

BE AT THE FOREFRONT OF INNOVATION

We have a strong research profile with established track records in the areas of tropical biodiversity and sustainability, diseases in the tropics, and functional and future foods.

1 QS World University Rankings by Subject 2025.

GET READY FOR THE REAL WORLD

Enhance your professional experience through science industry internships or projects.

BUILD YOUR PROFESSIONAL EXPERIENCE WITH AN INTERNSHIP OR PROJECT

Internships are a great way to gain work experience and prepare yourself for the demands of the real world. They let you apply what you've learnt to the workplace and network with potential employers – an important first step in your professional career.

A science-related work placement is offered as an elective unit to Bachelor of Science students, as a compulsory unit embedded within the course structure of the Bachelor of Food Science and Technology and Bachelor of Medical Bioscience, and as an industry project in the Bachelor of Applied Data Science.

Leveraging industry partnerships across the country and region, we've worked with multinational companies throughout the years to place our students.

GET AN EARLY START IN RESEARCH

You don't have to graduate to get involved in research. Experience a genuine research environment through undergraduate science research units where you'll learn from leading researchers and acquire knowledge and skills that'll prepare you for your final year project and higher degree studies.

GET GUIDANCE FROM OUR DEDICATED TEAM AT CAREER SERVICES

From finding work to developing your employability skills, we are here to support your career planning and development. Get advice from our career experts and participate in internship fairs, seminars and workshops, employer networking sessions and more.

BE MENTORED BY MONASH ALUMNI

Available to you during your final year of study, our career mentoring program matches you with experienced alumni for career advice and insights into your chosen industry.

STAY CONNECTED WITH US EVEN AFTER YOU GRADUATE

When you graduate, you'll join a global alumni community of more than 500,000 members living across 150 countries. All Monash graduates have access to our alumni programs, including networking opportunities and career-related events.

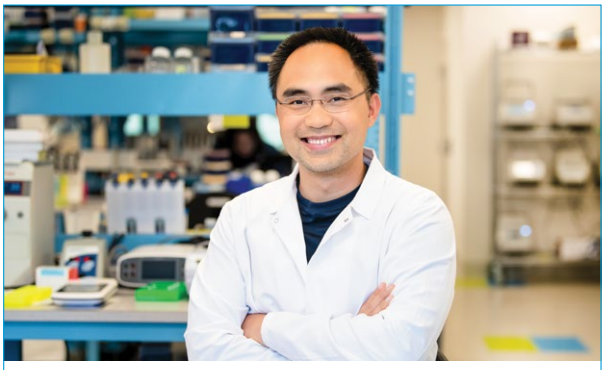
Yiing Yng's passion for genetic technology led her to pursue a career where she could help people using genetic tools. She began as a science communication specialist for a distributor of Illumina, Inc, the world leading developer of genetic technologies. There, she discovered the need for local expertise in genetic testing, as many healthcare providers were outsourcing tests overseas, causing delays and impacting patient care. This motivated her to revolutionise genetic innovation by making DNA analysis more advanced, accurate and accessible.

As CEO of SuperDNA, she led her team in developing a non-invasive genetic test report using Whole Genome Sequencing, which screens 1838 health traits. This achievement earned SuperDNA recognition from the Malaysian Book of Records in January 2024.

DR CHOW YIING YNG

Bachelor of Science (Honours), majoring in Biotechnology
Doctor of Philosophy

Chief Executive Officer, SuperDNA



Growing up with a family history of type 2 diabetes sparked Christianto's interest in the connection between diet and health, and he chose to study food science and technology so he could equip himself to develop nutritious and safe food products that contribute to a healthier lifestyle.

By day, Christianto specialises in developing seqWell's enzymatic-based DNA fragmentation technology for long-read sequencing. By night, he puts his time towards realising one of his passions: creating products with a lasting impact on improving health. Using his food science and technology knowledge, he developed the first product for his start-up: a high-protein waffle mix. He continues to focus on health and aims to make a meaningful difference in people's lives.

DR CHRISTIANTO PUTRA

Bachelor of Food Science and Technology

Scientist, seqWell USA
Founder, Proven Provisions

Where are our graduates?

Our graduates have taken their skills and experiences gained, combined with the passion to explore new worlds nurtured during their academic study, to traverse the globe and succeed in varied careers in very different societies and cultures. You, too, can go anywhere with a Monash degree.

JAMAL SAJJAD MANSURI
Bachelor of Medical Bioscience
Specialist Business Analyst
Amgen, United States

SONIA FERNANDEZ
Bachelor of Science (Medical Bioscience)
Director and Co-Country Head
Michael Page, Thailand

RIDZKI NOVIANSYAH
Bachelor of Medical Bioscience
Director,
PRecious Communications,
Indonesia

ETHAN WONG HSIEN AUN
Bachelor of Science (Tropical Environmental Biology and Microbiology)
Founder and Chief Operating Officer
Dododots, Malaysia

DR TIM MAK
Bachelor of Science (Honours)
Co-Founder and Chief Business Officer
Trilliome, Switzerland

JOLENE ANTHONY DASS
Bachelor of Science
(majoring in Medicinal Chemistry)
Humanitarian Affairs and
Institutional Advocacy Lead
Médecins Sans Frontières
(Doctors Without Borders),
Sri Lanka

DR LOW LEY HIAN
Bachelor of Science (Biotechnology)
Head of Business Development
CRMY Technologies,
Cancer Research Malaysia

MEGHNA JAHAJEEAH
Bachelor of Science (Biotechnology)
Bachelor of Science (Honours)
Operations Support and
Administration Manager
SGS S.A., Mauritius

DR NIRUPAM BISWAS
Doctor of Philosophy
(Food Science and Biotechnology)
Microbiology Scientist
New York State Department of Health,
USA

DR ANSHIKA SHARMA
Bachelor of Science (Biotechnology)
Bachelor of Science (Honours)
Doctor of Philosophy (Molecular Virology)
Lead Scientist
Thrixen, Singapore

DR TAN HUI LI
Bachelor of Science
(majoring in Medical Bioscience)
Bachelor of Science (Honours)
Doctor of Philosophy
Process Development Scientist
Pfizer, Singapore

DR DIANE SUNIRA DANIEL
Bachelor of Science (Honours)
Doctor of Philosophy (Microbiology)
Antimicrobial Resistance Scientist
University of Melbourne, Australia

SUPPORTING YOU ALL THE WAY

Your success is our success. We offer a range of services to help you when you start and throughout your course so that you'll be able to make the most of your university experience.

SCIENCE STUDENT SERVICES

Our expert advisors at the Education Management Office are there to help you shape your course that reflects your interests, passions and career goals. They'll also guide you through your enrolment and support you with all course-related processes and requirements.

PEER MENTORS

Our Peer Mentoring Program matches you with a senior science student who can help you get settled in and make friends as you begin your studies. The four-week program provides you with opportunities to meet like-minded fellow students in a social setting.

ACADEMIC MENTORS

In your first month of study, you'll be paired with an academic mentor who supports you throughout your journey at Monash. Your mentor offers guidance and encouragement to support your academic progress and personal development.

PEER ASSISTED STUDY SESSIONS (PASS)

PASS is an academic mentoring program for first-year students transitioning to university. It's a program of guided study groups run by PASS leaders, who are undergraduate students with strong academic records, to provide support for first-year units.

RESEARCH AND LEARNING SKILLS

The Academic Services team provides support across a wide range of academic and research skills through consultations, workshops, learning modules, and Studiosity. The School Librarian can work with you to identify and develop the research and learning skills you need.

DISABILITY SUPPORT SERVICES

If you have a disability, medical or mental health condition, you can access specialised support services from assistive technology to alternative assessment arrangements.

monash.edu.my/disability

STUDY ABROAD

Amazing experiences beyond the classroom.

Go on an overseas exchange at our Australian campuses or with one of our 140 partner universities around the world. You'll remain enrolled at your home campus and receive credit for your overseas study towards your Monash degree – all while continuing to pay your regular course fees.

A full-time transfer to Monash Australia to complete the remainder of your studies is also possible, furthering your globally enriching and rewarding educational experience.

HOW STUDYING ABROAD CAN GIVE YOU AN EDGE

There are many benefits to studying overseas. Research has shown that students with international study experience:

- have better grades throughout their degree
- are more employable once they graduate
- earn more throughout their career.

You'll expand your worldview through experiencing different cultures and ways of doing things. You'll build your self-confidence, and be more adaptable and independent. You'll also develop skills in effective communication, collaboration and time management.

monash.edu.my/study-abroad

"My student exchange was one of the most memorable experiences of my university journey. Living and studying abroad allowed me to immerse myself in a new culture, connect with people from different backgrounds, and gain a deeper appreciation for diversity. I learned to adapt quickly, became more independent, and built friendships that made the experience truly special."

PHOEBE CHAI YUEN ZHEN

Bachelor of Science

Exchanged to Newcastle University, UK

RESEARCH WITH IMPACT

Science at Monash is home to a vibrant, dynamic and world-renowned community at the forefront of innovation, discovery and learning.

Our interdisciplinary teams of researchers collaboratively work on critical problems at the intersection of biology, chemistry and medicine to deliver solutions for food security, water, environment and health. If you're open-minded, practical, curious, and able to question why, you have what it takes to make scientific discoveries that'll change the world we live in.

Infrastructure

Our research is supported by specialised facilities and comprehensive resources that can meet the demands of academic research and industrial collaborations. You'll have access to innovative and high-performance infrastructure providing quality research services.

Genomics Platform

Our advanced Genomics Platform provides moderate to high throughput nucleic acid sequencing and bioinformatics services to support local and international researchers.

It's the first laboratory and research platform at Monash University Malaysia to achieve the ISO 9001:2015 standard, awarded for providing consistent and quality service. The platform has produced over 200 publications and generated more than 4 terabytes of sequencing data.

Other major facilities and equipment

Our facilities include a pilot food processing facility, sensory laboratory, fluorescence microscopy, confocal microscopy, multimode spectrometry (absorbance, fluorescence and luminescence), Fourier-transform infrared spectroscopy (FTIR), atomic absorption spectroscopy (AAS), gas chromatography (flame ionisation and single-quad mass spectrometry), fast protein liquid chromatography, analytical and preparative high performance liquid chromatography (HPLC) and liquid chromatography-tandem mass spectrometry (LC-MS/MS) to support scientific discoveries and excellence in research.

Blind Asian River Dolphin Study (BARDS) Consortium

The critically-endangered South Asian river dolphins are thought to be closely related to blind river dolphins, a unique class of mammals that navigate by echolocation.

Working with peers from universities and research institutes in Bangladesh, Malaysia, Nepal, Pakistan and Qatar, Monash researchers are coordinating BARDS, a multinational effort which will contribute to the genome sequencing of the dolphins and extend our collaboration with the Vertebrate Genomes Project.

The findings from the Consortium will ultimately benefit ongoing conservation strategies in the region.

ELIMINATING PARASITES

Professor Qasim Ayub is studying the genetic diversity of human hosts and pathogens, and how our immune systems respond to parasitic infections to change the way we treat them.

Watch to learn more.

SCAN TO WATCH

OUR KEY RESEARCH AREAS

Diseases in the tropics

Dedicated to advancing public health in tropical regions through the convergence of natural resource innovation and cutting-edge technologies.

- Nanomaterials and organic vector applications (NOVA)
- Omics, response biology and translation (ORBiT)
- Quantitative theoretical analysis (QuanTA).

Tropical biodiversity and sustainability

Committed to advancing integrated research on species biodiversity and tropical ecosystems with environmental sustainability, conservation and climate change adaptation.

- Biodiversity discovery
- Climate change adaptation and ecosystem resilience
- Sustainability innovations.

Future and functional food

Leverages advanced food science, technology and innovation to mitigate the major food challenges of the 21st century.

- Lipids technology
- Microencapsulation and targeted delivery
- Sustainable packaging.

PhD student Harinash Rao won the 2025 Three Minute Thesis (3MT®) competition at Monash University, Australia, with his presentation Eczema: Patched with Sugar, Protein and Clay. This marks the first win by a student from the Malaysia campus in over a decade. He will go on to represent Monash University at the 3MT® Asia-Pacific finals.

Harinash's research addresses eczema, a common skin condition causing dry, itchy skin that often worsens during sleep. He developed a water-rich skin patch that provides lasting hydration and protection against scratching. With pharmaceutical companies exploring clinical trials, his innovation shows strong potential to transform how we approach skin treatment.

The 3MT®, developed by The University of Queensland, is an academic research communication competition that celebrates the exciting research conducted by PhD students in Australia and around the world.

BACHELOR OF SCIENCE

KPT/JPT (R3/0530/6/0005) 10/30 - MQA/SWA0129

3 years

February, July and October

RM51,360 Malaysian student
RM60,480 International student
2026 fees per year

Internship
(Optional)

CAREER PATHS

Graduates of this course can find employment in areas such as:

- clinical trials
- intellectual property management
- biomedical product industry
- drug discovery and development
- food safety
- food production
- business development
- water management
- biodiversity and conservation
- environmental management
- analytical/biomedical chemistry
- biotechnology
- quality assurance and control
- science journalism
- process control
- microbiology
- project management and consultancy
- natural products research
- scientific and regulatory affairs
- climate change advocacy.

Study science at Monash and learn from leading experts whose research is shaping the world's future.

The choice, flexibility and depth across the range of science disciplines available at Monash mean that you will graduate with a degree uniquely tailored to you, reflecting your individual expertise, interests and career aspirations.

We offer specialisations ranging from cutting-edge theoretical and applied science to new interdisciplinary fields. You can choose to focus on a single major, or pursue a double major and still complete your degree within three years. Successful completion of this course may provide a pathway to the one-year honours program Bachelor of Science (Honours).

Science graduates have a diverse range of interesting careers. The flexibility of the training and interdisciplinary approach nurtures greater adaptability in our science graduates. Our graduates are scientists, analysts, journalists, environmental advocates, and some are employed by corporate companies in roles such as procurement, marketing and corporate personnel. What makes this course special is that it allows you to pursue non-science units at different schools, like journalism or management, to form a study plan that suits your individual needs and career aspirations. You can even supplement a major with a minor.

Get ready for the real world

Build your professional experience with a science-related internship, offered as an elective unit during your summer semester[1]. This is a great way to prepare yourself for the demands of the real world. Leveraging on the industry partnerships across the country and region, we've worked with multinational companies over the years to place our students.

Areas of study

- Applied microbiology[2]
- Biotechnology
- Food science and business
- Genomics and bioinformatics
- Medicinal chemistry
- Psychology[2]
- Tropical environmental biology[2]
- Chemistry (minor)
- Genetics and genomics (minor).

Course structure

This course is structured in three equal parts:

PART A. SCIENCE SPECIFIED STUDY

This will expose you to several science disciplines, contributing breadth to your understanding of science and giving you the opportunity to learn more about several disciplines before finalising your choice of major. It'll also provide you with the mathematical or statistical foundation for your study of science, addressing the nature of science and its communication.

PART B. SCIENCE LISTED MAJOR

This will provide you with a focused course of study that develops your expertise in one discipline area. You'll learn how to apply and communicate an advanced level of understanding of the concepts as well as theoretical frameworks that constitute the knowledge base of the discipline.

PART C. FREE ELECTIVE STUDY

This will enable you to further develop your knowledge of your chosen major, or the sciences more broadly, or study a second science major. Alternatively, you can select units from any school in which you're eligible to enrol.

Your first year

This course provides you with a broad science education in your first year to let you explore your interests before you specialise in one or more areas that inspire you in your second year. This flexibility allows you to explore new areas, further develop your strengths in science, and pursue your interests beyond the area in which you specialise.

During your first year, you're encouraged to choose a range of subjects that can give you a breadth of science knowledge. Areas such as chemistry, biology, and statistics can complement exciting subjects like science communication, biotechnology, environmental biology, and psychology. Throughout the course, you can opt to focus entirely on science or pursue complementary interests with the free-elective component of the degree.

YEAR 1/LEVEL 1 UNITS

Two Level 1 science sequences (four units) from:

- Blueprints for life and Life on Earth
- Chemistry 1 advanced and Chemistry 2 advanced
- Foundations in psychology and Introduction to psychological inquiry.

1 Depending on your intake, the summer semester may commence before your third year or in between semesters of your third year.
2 Available as a minor.

YOUR GUIDE TO SCIENCE MAJORS

Within the Bachelor of Science, there are at least eight units that will make up your Science major. You'll also have eight units of free electives, which offer you the flexibility to shape your course in a number of different ways – such as extending your major to add depth, adding a second major or a minor from the same or another course, or studying a range of units from across the University.

APPLIED MICROBIOLOGY

Microorganisms are everywhere in the environment and play a crucial role in numerous natural processes. In this course of study, you will explore the structure of microorganisms and their way of life, their interactions with humans and other living organisms, and their role and interactions with the environment – both in beneficial and harmful ways.

You will learn how beneficial microorganisms are harnessed to develop products, processes, or solutions in various industries like medicine, agriculture, biomedical science, biotechnology, ecology, environmental management, food fermentation, food safety, and pharmaceutical. For harmful microorganisms, you will have a better understanding of control measures in addressing emerging health challenges, such as influenza outbreaks, SARS, Ebola, and the increasing antibiotic resistance in medically important bacteria.

YEAR 2/LEVEL 2 UNITS

- Fundamentals of microbiology
- Recombinant DNA technology
- Two level 2 or 3 science units
- Four elective units.

YEAR 3/LEVEL 3 UNITS

- Environmental microbiology
- Food and industrial microbiology
- Two units from:
  - Medical microbiology
  - Molecular biology and biotechnology
  - Science in action research project
- Two level 2 or 3 science units
- Two elective units.

CAREER OPTIONS

- Clinical, veterinary, food, industrial or environmental microbiologist
- Patent officer
- Research scientist
- Technical brewer
- Quality controller.

BIOTECHNOLOGY

Biotechnology is the study of using living organisms and biological systems to develop technological applications and solutions. It enables you to explore advancements in science and technology, manage global challenges, develop innovative solutions and improve the quality of life for people worldwide.

This program builds a solid foundation in the basic sciences, with a focus on essential laboratory skills such as instrumentation, experimental design, data analysis, biochemical and microbiological techniques, and recombinant DNA technology.

You will learn genetics, genomics, plant biotechnology, environmental biotechnology, ethics and regulation, which are crucial for the rapidly growing biotech industries worldwide. You will also develop scientific communication skills with practical classes that offer hands-on experience to enhance your laboratory skills.

YEAR 2/LEVEL 2 UNITS

- Foundations of genetics
- Recombinant DNA technology
- Two level 2 or 3 science units
- Four elective units.

YEAR 3/LEVEL 3 UNITS

- Laboratory and workplace management
- Medical and forensic genetics
- Two units from:
  - Plant biotechnology
  - Genomics and its applications
  - Molecular biology and biotechnology
  - Science in action research project
- Two level 2 or 3 science units
- Two elective units.

CAREER OPTIONS

- Biotechnology product developer
- Geneticist
- Hospital or medical laboratory technician
- Instrument specialist
- Intellectual property officer
- Pharmaceutical and product manufacturer
- Policy office
- Process control specialist.

FOOD SCIENCE AND BUSINESS

Food science and business is an interdisciplinary major combining food production and business insights. It bridges the gap between creating nutritious, safe, affordable, and sustainable food products and bringing them to the global market. You will learn the fundamentals of food and sensory science, food chemistry, food bioprocess, food processing, food product development and food safety and quality management.

Choose from three streams – digital marketing, strategic marketing, or management – to enhance your farm-to-market skills and master key marketing, management, or digital marketing concepts to respond to market challenges while meeting shareholder expectations.

CORE UNITS

- Chemistry 2 advanced (Level 1)
- Fundamentals of food and sensory science (Level 1)
- Food chemistry (Level 2)
- Food bioprocess technology (Level 2)
- Food processing (Level 3)
- Food product development (Level 3)
- Food safety and quality management (Level 3).

BUSINESS STREAMS (Choose one)

Digital marketing

- Marketing fundamentals (Level 1)
- Introduction to digital marketing (Level 2)
- Search engine marketing (Level 2)
- AI in marketing (Level 3)
- Social media marketing (Level 3).

Management

- Introduction to management (Level 1)
- International business (Level 2)
- Human resource management (Level 2)
- Strategic management (Level 3)
- Organisational behaviour and changes (Level 3).

Strategic marketing

- Marketing fundamentals (Level 1)
- Consumer behaviour (Level 2)
- Integrated marketing communication (Level 2)
- International marketing (Level 3)
- Strategic branding (Level 3).

YEAR 2 AND 3/LEVEL 2 AND 3 UNITS

- One level 2 or 3 science unit
- Six elective units.

CAREER OPTIONS

- Food entrepreneur
- Business development manager
- Food product development scientist
- Food production manager
- Food safety specialist.

GENOMICS AND BIOINFORMATICS

Genomics is a comprehensive study of the total genetic makeup of individual organisms, exploring their genetic structure, functions, and evolutionary history. It also integrates the study of genetics with computing technology, which helps in building better comprehension of biological organisms and their processes. Meanwhile, bioinformatics employs an array of analytical methods and tools to effectively analyse, interpret, and gain insights from genomic data.

Genomics and bioinformatics are therefore instrumental in improving conservation and biodiversity, enhancing crops and food security, driving a revolutionary shift in healthcare and personalised medicine, and enabling biotechnology breakthroughs that lead to drug and vaccine discoveries.

YEAR 2/LEVEL 2 UNITS

- Foundations of genetics
- Genomics and population genetics
- Two level 2 or 3 science units
- Four elective units.

YEAR 3/LEVEL 3 UNITS

- Bioinformatics
- Research methods in bioinformatics and big data analysis
- Genomics and its applications
- Medical and forensic genetics
- Two level 2 or 3 science unit
- Two elective units.

CAREER OPTIONS

- Research scientist
- Science writer
- Software developer
- Patent officer
- Forensic scientist
- Data analyst
- Bioinformatician
- Biotechnologist
- Bioconservationist.

MEDICINAL CHEMISTRY

Medicinal chemistry is an exciting field characterised by rapid progress involving the design, development, and research of the biological activities and properties of drugs. The field is driven by the desire to discover potent chemical compounds, primarily from a diverse array of natural products found in plants and microorganisms.

This major provides comprehensive learning in organic chemistry, synthetic chemistry, analytical chemistry, and pharmaceutical science. The curriculum focuses on the design and development of bio-active molecules and chemical synthesis of compounds, facilitating the discovery and development of new drugs and therapeutic agents for clinical use. The emphasis of this major is on the significance of understanding chemical structures and their interactions in biological systems. You will acquire hands-on experience with the latest research advances and the use of instrumentation. Applications in medicinal chemistry align with Malaysia's National Key Economic Area in healthcare, which encompasses three sectors: pharmaceuticals and biotechnology, medical technology, and health services.

YEAR 2/LEVEL 2 UNITS

- Inorganic and organic chemistry
- Spectroscopy and analytical chemistry
- Physiology of human body systems or Physiology of human health
- One level 2 or 3 science unit
- Four elective units.

YEAR 3/LEVEL 3 UNITS

- Medicinal chemistry
- Advanced organic chemistry
- Principles of pharmacology
- Two level 2 or 3 science unit
- One level 3 science unit
- Two elective units.

CAREER OPTIONS

- Analytical or biomedical chemist
- Biotechnologist
- Drug development chemist
- Industrial chemist
- Molecular design chemist
- Occupational hygienist
- Pharmaceutical and product manufacturer
- Risk-management consultant.

TROPICAL ENVIRONMENTAL BIOLOGY

Tropical environments are the most ecologically diverse environments on our planet. They include rainforests, mangroves, wetlands, peat swamps, freshwater and marine environments, among others. This program adopts an effective and environmentally friendly approach to promote conservation and sustainability, to mitigate environmental degradation and climate change.

Combining expertise in biodiversity, water quality management, wetland conservation, climate change mitigation, evolutionary ecology, and microbial ecology, Monash University Malaysia offers a unique advantage for studying tropical environmental biology.

This major offers specialised training in tropical environmental biology, focusing particularly on techniques and field skills essential for studying the environment, ecosystems and biodiversity. You will explore a diverse range of topics, including environmental science, tropical ecology, terrestrial and aquatic tropical biology, tropical environmental management, and the conservation of bioresources.

Through engaging field trips, informative lectures, and hands-on research projects, you will develop an appreciation for tropical environments. You will also gain a comprehensive understanding of various tropical ecosystems in the region. Your keen understanding and appreciation for the environment will help make a positive change to improve the environment for all life on earth.

YEAR 2/LEVEL 2 UNITS

- Introduction to ecological applications
- Global conservation and biodiversity
- Crop science
- One level 2 or 3 science unit
- Four elective units.

YEAR 3/LEVEL 3 UNITS

- Tropical environmental management
- Tropical terrestrial biology
- Tropical aquatic biology
- Two level 2 or 3 science unit
- One level 3 science unit
- Two elective units.

CAREER OPTIONS

- Environmental scientist
- Ecotourism operator
- Policy advisor
- Land use planner
- Marine biologist
- Museum scientist
- Natural resource manager
- Waste and resources consultant
- Water quality consultant.

PSYCHOLOGY

Psychology is the study of mind and behaviour. It is a broad scientific discipline that includes investigations of the brain, learning, memory, perception, reasoning, decision making, language, developmental and social processes, personality, and mental health and well-being. It is also concerned with the practical and ethical applications of psychological research to the field of psychology.

YEAR 2/LEVEL 2 UNITS[1]

- Six elective units (if you're choosing two PSY units) or five elective units (if you're choosing three PSY units)

Two or three units from:

- Biological psychology
- Psychological testing and assessment
- Developmental psychology
- Personality and social psychology.

YEAR 3/LEVEL 3 UNITS[1]

- Five elective units (if you're choosing three PSY units) or four elective units (if you're choosing four PSY units)

Three or four units from:

- Perception and cognitive psychology
- Psychological disorders
- Research methods in psychology
- Cultural safety, responsiveness and reflexivity in practice.

1 Select two Level 2 units plus four Level 3 units, or three Level 2 units plus three Level 3 units.

Minors

CHEMISTRY

Chemistry is the study of the composition and structure of substances, how their atoms and molecules react and interact, and how that behaviour can be harnessed to transform materials, medicine, and technology. It is considered a core science and the foundation for more specialised disciplines.

GENETICS AND GENOMICS

Genetics is the study of genes, their structure, function, transmission and evolution. Genomics allows researchers to expand their vision from a few genes to all of the thousands of genes that govern the lives of each organism. Together, they underpin many exciting areas such as conservation biology and forensics.

These areas are also available as minors:

- Applied microbiology
- Psychology
- Tropical environmental biology.

"I knew that pursuing this course would provide me with the knowledge and skills to contribute towards advancing the application of biotechnology in improving lives. At Monash, I had access to renowned lecturers, great facilities, and a supportive learning environment that helped me grow both academically and personally."

MAH KA WENG

Bachelor of Science (majoring in Biotechnology)

Medical Excellence Director, Amgen JAPAC (Japan Asia-Pacific)

Ka Weng's goal is to help translate science into real patient impact as quickly as possible. He hopes to make a difference by delivering scientific engagement of the highest standards, ensuring that every medical decision is backed by robust evidence and a deep understanding of patient needs.

SAMPLE COURSE MAP[1] (FEBRUARY INTAKE)

What your course will look like if you majored in applied microbiology.

YEAR 1/LEVEL 1	UNITS			
Semester 1 24 Credit points	**BIO1011** Blueprints for life 6 Credit points	**CHM1051** Chemistry 1 advanced 6 Credit points	**SCI1020** Introduction to statistical reasoning 6 Credit points	Elective 6 Credit points
Semester 2 24 Credit points	**BIO1022** Life on Earth 6 Credit points	**CHM1052** Chemistry 2 advanced 6 Credit points	**SCI1000** Science communication to influence change 6 Credit points	Elective 6 Credit points
YEAR 2/LEVEL 2	**UNITS**			
Semester 1 24 Credit points	**BTH2830** Fundamentals of microbiology 6 Credit points	Level 2 or 3 Science unit 6 Credit points	Elective 6 Credit points	Elective 6 Credit points
Semester 2 24 Credit points	**BTH2732** Recombinant DNA technology 6 Credit points	Level 2 or 3 Science unit 6 Credit points	Elective 6 Credit points	Elective 6 Credit points
Summer semester[2] 6 credit points	Recommended elective: **SCI1800** Introduction to environmental sustainability, or **SCI3800** Science internship. 6 Credit points			
YEAR 3/LEVEL 3	**UNITS**			
Semester 1 24 Credit points	**BTH3732** Environmental microbiology 6 Credit points	**FST3711** Food and industrial microbiology 6 Credit points	Level 2 or 3 Science unit 6 Credit points	Elective 6 Credit points
Semester 2 18 Credit points	Two units from: • **BTH3722** Medical microbiology • **BTH3752** Molecular biology and biotechnology • **SCI3990** Science in action research project 12 Credit points total		Level 2 or 3 Science unit 6 Credit points	

Science specified study Science listed major Free elective study

1 This course map is intended as a rough guide. Units listed may vary depending on intake, availability and the latest requirements.
2 Depending on your intake, the summer semester may commence before your third year or in between semesters of your third year.

Scan to view all science major course maps.

BACHELOR OF APPLIED DATA SCIENCE

KPT/JPT (N/0542/6/0002) 10/27 - MQA/PSA 15926

3 years

February, July and October

RM51,360 Malaysian student
RM60,480 International student
2026 fees per year

Industry placement

CAREER PATHS

Your career options cover a range of areas and industries including:

- analytical/biomedical chemistry
- clinical trial management
- drug discovery and development
- food product/process development
- fraud detection and risk modelling
- medical, healthcare and insurance industry
- operations and supply chain
- population statistics
- project management and consultancy
- regulatory affairs and quality assurance.

We live in an era where information and knowledge are more abundant than before.

The decisions that shape our future depend on graduates who can uncover insights from large volumes of data and communicate them effectively to industry and community leaders.

This course equips you with the technical expertise to tackle complex data challenges and deliver innovative solutions across diverse fields. It will provide you with advanced knowledge and technical skills in data science to design, analyse, implement and apply methods that make a meaningful impact on everyday life.

You'll learn how to process large volumes of data and turn them into actionable insights across a very wide range of disciplines.

Successful completion of this course may provide a pathway to the one-year honours program Bachelor of Science (Honours).

What sets this course apart?

With the Applied studies in science component, you will dive into exciting interdisciplinary areas, build a unique skill set through the equivalent of a minor, and enrich your learning with real-world, hands-on experiences that set you apart from the crowd.

Course structure

PART A. DATA CHALLENGES

These studies will develop your analytical skills and ability to apply key information technology and mathematical concepts and methods. These skills will be elaborated through studio-based learning using authentic case studies sourced from industry partners, and with examples drawn from STEM areas, business, law, the humanities and social sciences. You'll learn to integrate a range of skills including collaborative work practices, communication, leadership and entrepreneurship, which will prepare you for the professions of the future.

PART B. TECHNIQUES FOR DATA SCIENCE

Through this theme you'll gain the technical foundation that underpins this course, acquiring the knowledge and skills in mathematics and the capacity to tackle challenging problems in a variety of situations. Through core data science studies, you'll attain the skills needed to effectively use, develop and manage complex data. These two areas are critical for tackling the diverse problems encountered in Part A of the course.

PART C: APPLIED STUDIES

These studies will provide the foundation required to advance cross-disciplinary analytical thought. You'll undertake a sequence of study in a chosen discipline, exploring new and diverse areas and developing core strengths in studies that relate to data applications. Data applications relating to these subjects can then be incorporated through the learning experiences across Part A. Each of the applied studies consists of 4 units (24 credit points). Please select one of the applied studies below:

- Biological science and genetics
- Chemical sciences
- Environmental science
- Biotechnology
- Food and nutrition
- Forensic genetics
- Health and human physiology.

PART D. ELECTIVE

This will enable you to further develop your technical skills or extend your knowledge in your selected applied studies. Alternatively you can select units from across the university in which you are eligible to enrol.

Industry placement

In your third year, you'll complete Advanced data challenges, a project-based unit with heavy industry involvement. You'll gain hands-on, real-world exposure to the workplace environment while further developing your graduate attributes and employability skills.

SAMPLE COURSE MAP[1] (FEBRUARY INTAKE)

What your course will look like

YEAR 1	UNITS			
Semester 1 24 Credit points	**ADS1001** Data challenges 1 6 Credit points	**FIT1045** Introduction to programming 6 Credit points	**ENG1090** Foundation mathematics 6 Credit points	Applied studies 6 Credit points
Semester 2 24 Credit points	**ADS1002** Data challenges 2 6 Credit points	**FIT1043** Introduction to data science 6 Credit points	**ENG1005** Engineering mathematics 6 Credit points	Applied studies 6 Credit points

YEAR 2	UNITS			
Semester 1 24 Credit points	**ADS2001** Data challenges 3 6 Credit points	**FIT2094** Databases 6 Credit points	**MTH2019** Multivariate mathematics for data science 6 Credit points	Applied studies 6 Credit points
Semester 2 24 Credit points	**ADS2002** Data challenges 4 6 Credit points	**FIT2086** Modelling for data analysis 6 Credit points	**MTH2051** Introduction to computational mathematics 6 Credit points	Applied studies 6 Credit points

YEAR 3	UNITS			
Semester 1 24 Credit points	**MTH3320** Computational linear algebra 6 Credit points	**MTH3330** Optimisation and operations research 6 Credit points	Elective 6 Credit points	Elective 6 Credit points
Semester 2 24 Credit points	**ADS3001** Advanced data challenges 12 Credit points		**FIT3181** Deep learning 6 Credit points	**FIT3154** Advanced data analysis 6 Credit points

Data challenges Techniques for data science Applied studies Elective unit

1 This course map is intended as a rough guide. Units listed may vary depending on intake, availability and the latest requirements.

3 years

February, July and October

RM51,360 Malaysian student
RM60,480 International student
2026 fees per year

Accredited

Internship

CAREER PATHS

You'll find employment in national and multinational food companies in the following areas:

- food product/process development
- quality assurance and control
- sensory science and evaluation
- food laws and regulations
- food hygiene and safety
- food packaging
- food production
- flavour/food chemistry
- food microbiology
- natural products research
- scientific and regulatory affairs.

BACHELOR OF FOOD SCIENCE AND TECHNOLOGY

KPT/JPT (R2/0721/6/0061) 06/29 - MQA/SWA0794

Shape the future of food, nourish the world.

This is your opportunity to positively impact the health and wellbeing of future generations, while addressing one of the world's most pressing challenges: global food security.

Food science integrates biology, physics, and chemistry to understand the intricacies of food and its composition. From the harvesting and preparation to final consumption, every step plays a crucial role in ensuring the food is safe, nutritious and sustainable.

Complementing this, food technology applies scientific understanding and principles to the development, processing and preservation of raw materials into nutritious and innovative food products that feed the world. You'll study the principles of food, including preservation, processing, packaging, and distribution, and discover how technological innovations help maintain freshness, safety, nutrition and quality throughout the food supply chain.

You'll also engage with emerging topics such as sustainability, food innovations and global food security, preparing you to contribute to a more resilient and sustainable food system for the future. Successful completion of this course may provide a pathway to the one-year honours program Bachelor of Science (Honours).

Our facilities

By learning in our exciting spaces that bring theory to life, you'll experience what it's like to work in the food processing industry. Our pilot food processing facility offers hands-on experience with equipment for hard ice cream and soft serve production, fruit juice pasteurisation, spray drying, and supercritical carbon dioxide extraction.

The laboratory also features specialised stations for activities such as dehydration, particle size reduction, food fermentation, and food packaging. You will apply scientific concepts, experiment with technology, and develop practical skills. Here, you'll not only learn the science behind food but also gain the skills to create, innovate, and shape its future.

Accreditation

This course is accredited by the International Union of Food Science and Technology (IUFoST).

Areas of study

This course provides a solid scientific foundation in chemistry, microbiology, biochemistry and physical sciences, with knowledge of processing and formulation of agricultural raw materials into safe and nutritious food products.

You'll have the opportunity to study a broad range of topics, such as:

- Biochemistry
- Biology
- Chemistry
- Food microbiology
- Human nutrition
- Laboratory management
- Strategic food quality management
- Food product development and innovation
- Food processing, preservation and packaging
- Food chemistry
- Microbiology
- Food bioprocess technology
- Functional foods
- Statistics.

Course structure

The course develops through three themes of foundation sciences and scientific practice, food science and food technology that culminate in a food science internship. There will also be some elective study.

PART A. CORE FOUNDATION STUDIES

Food science is an interdisciplinary field which draws on a broad scientific foundation. These studies develop your understanding of the core sciences and introduce key areas of scientific communication, laboratory practice, as well as the scientific techniques and processes that drive innovation in food science.

PART B. PROFESSIONAL PRACTICE

These studies give you the opportunity to integrate the various strands of your learning in a real workplace by completing a minimum of eight weeks of industrial placement.

PART C. ELECTIVE STUDIES

These studies will enable you to further develop your knowledge of food science and technology or to select units from across the university in which you are eligible to enrol.

SAMPLE COURSE MAP[1] (FEBRUARY INTAKE)

What your course will look like

YEAR 1	UNITS			
Semester 1 24 Credit points	**BIO1011** Blueprints for life 6 Credit points	**CHM1051** Chemistry 1 advanced 6 Credit points	**FST1800** Fundamentals of food and sensory science 6 Credit points	**FST1911** Introduction to nutrition 6 Credit points
Semester 2 24 Credit points	**CHM1052** Chemistry 2 advanced 6 Credit points	**SCI1020** Introduction to statistical reasoning 6 Credit points	**SCI1000** Science communication to influence change 6 Credit points	Elective 6 Credit points
YEAR 2	**UNITS**			
Semester 1 24 Credit points	**BTH2741** Biochemistry and metabolism of biomolecules 6 Credit points	**BTH2830** Fundamentals of microbiology 6 Credit points	Elective 6 Credit points	Elective 6 Credit points
Semester 2 24 Credit points	**CHM2922** Spectroscopy and analytical chemistry 6 Credit points	**CHM2962** Food chemistry 6 Credit points	**SCI2716** Laboratory safety and management 6 Credit points	**FST2810** Food bioprocess technology 6 Credit points
Summer semester[2] 6 Credit points	**FST3800** Food science internship 6 Credit points			
YEAR 3	**UNITS**			
Semester 1 18 Credit points	**FST3711** Food and industrial microbiology 6 Credit points	**FST3820** Food preservation 6 Credit points	Elective 6 Credit points	
Semester 2 24 Credit points	**FST3830** Functional foods 6 Credit points	**FST3840** Food processing 6 Credit points	**FST3850** Food product development 6 Credit points	**FST3862** Food safety and quality management 6 Credit points

Core foundation studies Professional practice Elective studies

1 This course map is intended as a rough guide. Units listed may vary depending on intake, availability and the latest requirements.
2 Depending on your intake, the summer semester may commence before your third year or in between semesters of your third year.

“Monash stood out to me as the kind of university I wanted to be part of, and it absolutely met my expectations. I enjoyed my academic journey, appreciated the passionate lecturers, and, most importantly, formed lasting friendships that have continued for over a decade.

My ultimate goal is to raise awareness about synthetic food additives and their potential health risks. I want to contribute to a future where people are better educated about what they eat, because ultimately, we are what we eat. I hope to make natural, healthier food solutions more accessible and widely adopted.”

CONNIE DEVI DORAISINGAM

Bachelor of Science (Food Science and Technology)

Country Sales Manager, Kemin Food Technologies Asia

3 years

February, July and October

RM51,360 Malaysian student
RM60,480 International student
2026 fees per year

Internship

CAREER PATHS

Our graduates find employment in:

- clinical laboratories
- forensic science
- medical, healthcare and insurance industry
- regulatory affairs and quality assurance
- biomedical equipment and pharmaceutical industry
- infectious disease/histopathology research
- science journalism
- clinical trial management
- clinical nutrition.

BACHELOR OF MEDICAL BIOSCIENCE

KPT/JPT (R2/0510/6/0001) 06/29 - MQA/SWA0795

Delve into the science at the centre of healthcare.

Medical Bioscience is at the heart of the understanding of the human body, healthcare, disease and biosciences. Explore a diverse spectrum of interconnected life science subjects, facilitated by cutting-edge laboratories that facilitate learning and a nurturing ground for honing research skills.

Yet, this program is far from confining you solely to microscopic observation. It takes a holistic approach, integrating hands-on fieldwork with immersive laboratory experiences and meaningful engagements within community health organisations, research institutes and pharmaceutical industries. This program not only imparts professional training and theoretical knowledge but also fosters a well-rounded, adaptable skill set.

What truly distinguishes this degree is its bespoke design to harmonise with the Malaysian context. A distinctive emphasis is placed on unravelling medical bioscience within the tropical environment. As such, it hones your proficiency in tropical medicine techniques, aligning your education with the region's unique healthcare dynamics. Moreover, the program opens the door to embarking on a research experience, delving deep into a medical bioscience subject of your passion.

Successful completion of this course may provide a pathway to the one year honours program Bachelor of Science (Honours).

Our facilities

You'll have access to well-equipped laboratories to support your studies and the development of research skills, with facilities for DNA sequencing, mass spectrometry, confocal microscopy, high performance liquid chromatography, microbiology, histology processing unit, and tissue culture. You'll use and learn the latest technology in medical bioscience.

Areas of study

You can study a broad range of topics in:

- biology
- genetics
- chemistry
- biochemistry
- cellular metabolism
- immunology
- physiology
- microbiology
- pathology
- pharmacology
- toxicology
- hematology and transfusion science.

Course structure

The course develops through two themes, firstly, a foundation in medical bioscience and, secondly, human health that culminates in medical bioscience practice through an internship. There will also be some elective study.

PART A. CORE FOUNDATION STUDIES

These studies provide the scientific foundations for a career in medical bioscience with a focus on medical and molecular diagnostics, as well as and medical biotechnology. You'll gain knowledge in the areas of biology, genetics, molecular biology, microbiology, chemistry, alongside practical skills in diagnostic techniques, laboratory practices and scientific communication.

You'll gain a strong understanding of the core elements of modern science by looking at scientific discovery through history and the skills to assess the validity of scientific information. You will engage deeply with disciplines relevant to medical bioscience, including human physiology, biochemistry, cellular metabolism, microbiology, immunology, pathology, pathology, hematology, pharmacology and toxicology. Additionally, you will learn how the human body's systems interact to perform complex physiological functions, equipping you with a holistic understanding of human biology and its biomedical applications.

PART B. PROFESSIONAL PRACTICES

These studies give you the opportunity to integrate the various strands of your learning in a real workplace by completing a minimum of eight weeks of work-based training in hospitals and medical research centres.

PART C. ELECTIVE STUDIES

This will enable you to further your knowledge in your choice of units from any school, including units from other science courses.

SAMPLE COURSE MAP[1] (FEBRUARY INTAKE)

What your course will look like

YEAR 1	UNITS			
Semester 1 24 Credit points	**BIO1011** Blueprints for life 6 Credit points	**CHM1051** Chemistry 1 advanced 6 Credit points	**SCI1020** Introduction to statistical reasoning 6 Credit points	Elective 6 Credit points
Semester 2 24 Credit points	**BIO1022** Life on Earth 6 Credit points	**CHM1052** Chemistry 2 advanced 6 Credit points	**SCI1000** Science communication to influence change 6 Credit points	Elective 6 Credit points
YEAR 2	**UNITS**			
Semester 1 24 Credit points	**BTH2741** Biochemistry and metabolism of biomolecules 6 Credit points	**BTH2830** Fundamentals of microbiology 6 Credit points	**GEN2041** Foundation of genetics 6 Credit points	Elective 6 Credit points
Semester 2 24 Credit points	**SCI2716** Laboratory safety and management 6 Credit points	**BTH2752** Cellular metabolomics of macronutrients 6 Credit points	**PHY2810** Physiology of human body systems 6 Credit points	**MBS2820** General pathology 6 Credit points
Summer semester[2] 6 Credit points	**MBS3800** Medical bioscience internship 6 Credit points			
YEAR 3	**UNITS**			
Semester 1 18 Credit points	**PHA3801** Principles of pharmacology 6 Credit points	**PHA3800** Fundamentals of toxicology 6 Credit points	**GEN3051** Medical and forensic genetics 6 Credit points	Elective 6 Credit points
Semester 2 24 Credit points	**BTH3722** Medical microbiology 6 Credit points	**IMM3802** Essentials of applied immunology 6 Credit points	**MBS3020** Haematology and transfusion science 6 Credit points	

Core foundation studies Professional practice Elective studies

1 This course map is intended as a rough guide. Units listed may vary depending on intake, availability and the latest requirements.
2 Depending on your intake, the summer semester may commence before your third year or in between semesters of your third year.

"Monash is one of the pioneering private universities in Malaysia with globally recognised qualifications. I chose the double degree to broaden my career options beyond laboratory, research, or academia. Within my ability, I want to make a positive impact on society. In my current role, I feel fulfilled contributing to the development of transformative medications for cancer patients in need."

JOEANNE WONG

Bachelor of Science (Biotechnology) and Bachelor of Science (Medical Bioscience)

Head of Oncology Business Unit, AstraZeneca Malaysia

1 year

February and July

RM51,360 Malaysian student
RM60,480 International student
2026 fees per year

CAREER PATHS

Our graduates work in:

- drug and pharmaceutical industry
- food manufacturing processes and development
- product commercialisation and business development
- biotechnology product development
- biomanufacturing
- clinical genetics
- clinical science and research management
- environmental consulting and management
- intellectual property management
- research and development.

BACHELOR OF SCIENCE (HONOURS)

KPT/JPT (R3/0530/6/0004) 10/30 - MQA/SWA0130

Gain a higher level of experience in independent analysis and research in your chosen field of expertise.

You can choose to pursue this additional one-year degree after the first three years of your undergraduate study.

Look forward to a rich intellectual experience and to developing a range of transferable skills for enhanced career opportunities. This course is also a stepping stone towards higher research qualifications in science, such as the Master of Science or Doctor of Philosophy.

Areas of specialisation

- Biotechnology
- Food science and technology
- Medical bioscience
- Medicinal chemistry
- Tropical environmental biology

Course structure

This course consists of a combination of coursework and research. In the coursework component you will develop advanced theoretical and/or technical knowledge of your discipline within science and research methodologies appropriate to your discipline. In the research component you will plan and execute a research project under the individual guidance of an academic supervisor.

2 years (full-time)
4 years (part-time)*

Throughout the year
(subject to availability of supervision)

Research

RM48,480 Malaysian student
RM54,720 International student
2026 fees per year

* Part-time study is not available for international students.

CAREER PATHS

Science graduates find employment in:

- genetic engineering
- agricultural management
- pharmaceutical science
- banking and finance
- environmental consulting
- medical research
- healthcare sectors
- food industries.

MASTER OF SCIENCE (RESEARCH)

KPT/JPT (R3/421/7/0012) 06/28 - MQA/SWA0121

Pursue independent research in a specific scientific field for a shorter duration than a PhD.

If you're unsure whether a PhD is right for you, this course can give you the experience of what studying for a doctorate might be like, while developing your skills and earning a degree that will enhance your employment prospects. If you decide that you're passionate about your research, the option of upgrading to a PhD after your first year is possible.

This research degree may be undertaken in any of the school's principal research areas and strengths. Your work will be expected to make a significant contribution to the knowledge and understanding of your chosen field of study and demonstrate your capacity to carry out independent research.

Areas of study

- Biodiversity and conservation
- Biotechnology
- Chemistry
- Food science and technology
- Genetics, genomics and bioinformatics
- Infectious disease
- Medical bioscience
- Microbiology
- Natural products and drug discovery
- Tropical and environmental biology.

Course structure

This course consists of a research and thesis component.

You must, in consultation with and under the direct supervision of a member/s of the academic staff:

- carry out a program of research on an agreed topic approved in your chosen discipline for a specified period, including attending and/or presenting at seminars and other related activities as indicated by the school
- submit for assessment a thesis of not more than 50,000 words on the program of research which meets the requirements of the examiners. Submission of a thesis including published works may be permitted.

Progression to further studies

You can apply to transfer to a PhD candidature after a defined period (usually 9-12 months enrolment, full-time or equivalent), provided that satisfactory progress has been made and certain conditions are met.

DOCTOR OF PHILOSOPHY

KPT/JPT (N/0500/8/0002) 08/31 - MQA/PSA 17707

Monash is committed to providing graduate research education of the highest quality in a stimulating, supportive and professional environment.

By undertaking a PhD in Science, you'll become a member of a dynamic community of scholars committed to innovation and discovery and contribute to the advancement of knowledge within your area of expertise. Our PhD graduates are highly employable, with many pursuing careers in academia and industry around the world.

At the core of the program is an extensive, independent research project on an agreed chosen topic, supported by at least two expert academic supervisors. Your study will result in a research thesis, which makes a valuable contribution to the current body of knowledge on your chosen topic.

Areas of research

- Biodiversity and conservation
- Biotechnology
- Chemistry
- Food science and technology
- Genetics, genomics and bioinformatics
- Infectious diseases
- Medical bioscience
- Microbiology
- Natural products and drug discovery
- Tropical and environmental biology.

Course structure

The course consists of a:

- research and thesis component
- professional development training program.

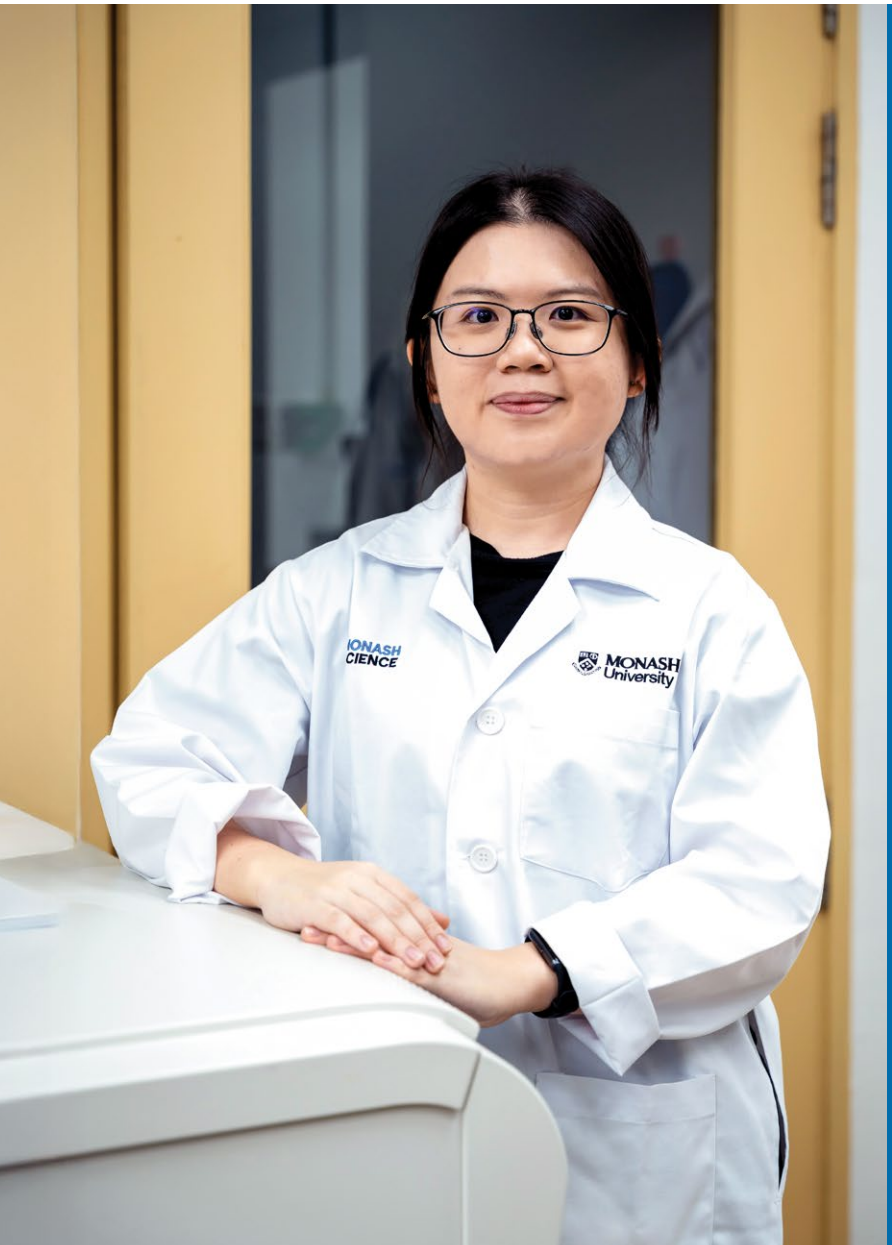
3 – 4 years (full-time)
6 – 8 years (part-time)*
Your PhD research project is to be conceived from the outset as clearly achievable within three years equivalent full-time, and you're expected to complete your degree within three to four years equivalent full-time.

Throughout the year
(subject to availability of supervision)

Research

RM48,480 Malaysian student
RM54,720 International student
2026 fees per year

* Part-time study is not available for international students.



"I chose Monash because of its great reputation as a leading research institute. I'm enjoying the learning environment, which motivates me to challenge myself academically and explore my interests deeply. My study experience so far has been fulfilling as it has equipped me with the skills and knowledge to grow into a more capable researcher."

LIM EN QI

Bachelor of Medical Bioscience
Bachelor of Science (Honours)
Currently pursuing the Doctor of Philosophy

En Qi, recipient the prestigious MyBrainSc Scholarship for her PhD, is at the forefront of groundbreaking research in venom biology. Her study focuses on understanding the molecular components of cobra venom and how they interact with cells. By uncovering these interactions, her work contributes to a deeper understanding of venom biology and its potential applications.

En Qi exemplifies the kind of impactful, high-level research that happens at Monash Science, inspiring future scientists to explore and tackle real-world challenges.

ENTRY REQUIREMENTS

ENGLISH PROFICIENCY TESTS

Monash University accepts:

- IELTS (Academic)/IELTS One Skill Retake (Academic)/ IELTS Online – Overall band score of 6.5 with no band less than 6.0. **www.ielts.org**
- TOEFL iBT/TOEFL iBT Paper Edition – A total score of 79 with 12 in Listening, 13 in Reading, 21 in Writing and 18 in Speaking. **www.ets.org**
- Pearson Test of English (Academic) – Overall score of 58 with no Communicative Skills lower than 50. **www.pearsonpte.com**
- C1 Advanced/C2 Proficiency – Overall score of 176 with no skill score lower than 169. **www.cambridgeenglish.org**
- Monash English (selected courses)

Higher scores are required for the Doctor of Philosophy.

monash.edu/graduate-research/support-and-resources/handbooks

Tests must be taken within 24 months prior to the course commencement date.

FEES

All tuition fees and course durations specified in this guide are in Malaysian Ringgit and only apply to courses studied at the Malaysian campus. The tuition fees quoted are for 48 credit points and are applicable to courses commencing in 2026. Tuition fees for courses commencing in 2027 will be different. Monash University Malaysia reserves the right to adjust the annual tuition fees in future years of your course. Any adjustment will be applied on the first day of January each year.

Effective 1 July 2025, the Malaysian Government has expanded the Sales and Service Tax (SST) framework to include education services for international (non-Malaysian) students. This means a 6% service tax will apply to tuition and other related education fees charged by private higher education providers, including Monash University Malaysia. The fees listed in this guide exclude the service tax.

GENERAL FEES

Application (once only)	AUD37 (My.App portal) RM100 (other payment methods) Malaysian citizen AUD40 (My.App portal) RM106 (other payment methods) Non-Malaysian citizen
Registration (once only)	RM200
General amenities (per semester)	RM100

International student pass
Visit **monash.edu.my/student-pass**

Need help with your application?
Contact us:

mum.enquiry@monash.edu
+60 3 5514 6000
Live Chat (Weekdays from MYT 9am to 5pm)
ask.monash.edu.my

Course	Study mode	Duration	Intakes	2026 fees		Prerequisites and additional requirements
Bachelor of Science		3 years	February, July and October	Malaysian student **RM51,360** (per year)	International student **RM60,480** (per year)	English (Monash's minimum requirements apply) One of Biology, Chemistry, Environmental Science, Geography, Physics, Psychology or Higher level Mathematics (Australian Year 12 equivalent) *Meeting the Monash course prerequisites are also subject to the five year rule.*
Bachelor of Applied Data Science		3 years	February, July and October	Malaysian student **RM51,360** (per year)	International student **RM60,480** (per year)	English (Monash's minimum requirements apply) Higher level Mathematics (Australian Year 12 equivalent) *Meeting the Monash course prerequisites are also subject to the five year rule.*
Bachelor of Food Science and Technology		3 years	February, July and October	Malaysian student **RM51,360** (per year)	International student **RM60,480** (per year)	English (Monash's minimum requirements apply) One of Biology, Chemistry, or Higher level Mathematics (Australian Year 12 equivalent)
Bachelor of Medical Bioscience		3 years	February, July and October	Malaysian student **RM51,360** (per year)	International student **RM60,480** (per year)	English (Monash's minimum requirements apply) One of Biology, Chemistry, or Higher level Mathematics (Australian Year 12 equivalent)
Bachelor of Science (Honours)		1 year	February and July	Malaysian student **RM51,360** (per year)	International student **RM60,480** (per year)	English (Monash's minimum requirements apply)
Master of Science (Research)	Research	2 years (full-time) 4 years (part-time)	Throughout the year. Subject to availability of supervision.	Malaysian student **RM48,480** (per year)	International student **RM54,720** (per year)	
Doctor of Philosophy	Research	3-4 years (full-time) 6-8 years (part-time)	Throughout the year. Subject to availability of supervision.	Malaysian student **RM48,480** (per year)	International student **RM54,720** (per year)	

1 The Malaysian Qualification Agency (MQA) accepts a minimum D Grade in A Level to be equivalent to the STPM Pass grade. For more information, visit **monash.edu.my/study/entry-requirements/academic/undergraduate/calculating-entry-scores**

2 The undergraduate entry requirements published in this guide are for students who commenced the MUFY program in 2025.

3 Diploma of Higher Education Studies and Monash College Diploma Part 2 provide a pathway into the second year of the corresponding undergraduate studies.

HOW TO APPLY

Undergraduate/Coursework degrees

1. Apply monash.edu.my/apply-online
2. Your application is assessed
3. Accept your offer monash.edu.my/accept

Malaysian students

4. Arrange for accommodation (if required)
5. Participate in orientation monash.edu.my/orientation

International students

4. Apply for your student pass monash.edu.my/student-pass
5. Your student pass is approved
6. Apply for single entry visa (if required)*
7. Plan your arrival monash.edu.my/lets-begin
8. Participate in orientation monash.edu.my/orientation

Research degrees

1. Check your eligibility and find your supervisors
2. Submit an Expression of Interest monash.edu.my/EOI
3. Receive an invitation to apply and lodge a formal application monash.edu.my/apply-graduate-research
4. Your application is assessed
5. Accept your offer

*Please refer to the Education Malaysia Global Services's website for more information on SEV required countries: **visa.educationmalaysia.gov.my/guidelines/sev-required-countries.html**

QUALIFICATION	GLOBAL		AUSTRALIA					CANADA	HONG KONG	INDIA		INDONESIA				MALAYSIA					SRI LANKA	VIETNAM
			MONASH									SMA3[5]										
	GCE A Level[1]	International Baccalaureate (IB) Diploma	Monash University Foundation Year[2]	Diploma of Higher Education Studies (DHES)[3]	Monash College Diploma Part 2[3,4]	ATAR	UNSW Foundation Studies	Ontario Secondary School Diploma	Hong Kong Diploma of Secondary Education	All India Senior School Certificate Examination	Indian School Certificate Examination	KKM 65	KKM 70	KKM 75	KKM 80	STPM	UEC	Program Matrikulasi (Matriculation Program)	Foundation in Arts, Sunway College	Foundation in Science and Technology, Sunway College	Sri Lankan General Certificate of Education (Advanced Level)	High School Diploma
	9	28	72.5%	50%	55%	80	7.5	81.6%	18	75%	70%	83%	84%	85%	88%	8.5	≤4.2	2.67	70%	70%	11	8.28
	9	28	72.5%	N/A	60%	80	7.5	81.6%	18	75%	70%	83%	84%	85%	88%	8.5	≤4.2	2.67	Δ	70%	11	8.28
	8	26	63.75%	50%	50%	75	7	78.5%	17	70%	65%	80%	82.5%	83%	85%	7.9	≤5	2.33	N/A	65%	10	8.14
	8	26	67.5%	50%	50%	75	7	78.5%	17	70%	65%	80%	82.5%	83%	85%	7.9	≤5	2.33	N/A	65%	10	8.14

Requirements

Successful completion of a Bachelor of Science (or equivalent) with at least distinction average (70%) in 24 points of level three units (or equivalent) in the intended honours discipline. The units upon which admission to the Honours program is based must have been completed no more than five years prior to commencement of the course.

- Either a bachelor's degree requiring at least four years of full-time study, and which normally includes a research component in the fourth year with upper H2B (a mark of 65 or above) in an honours year in a relevant field; or
- A master's degree in a relevant field that entails work, normally including a significant research component, at least equivalent to an honours degree (a 'significant research component' in a master's degree will vary from discipline to discipline). It is normally expected that at a minimum, a grade of upper 2B (with an overall mark of at least 65 or above) has been obtained for the research thesis or project. Where ungraded, examiners' reports will be taken into account; or
- Have qualifications which in the opinion of the Graduate Research Committee are deemed equivalent.
- You must also satisfy the University's minimum English language proficiency requirements for admission to this research degree.

- A bachelor's degree of at least four years in a relevant discipline, which includes a research thesis or project, with a minimum overall average grade of an honours degree equivalent to the Second Class Honours Division A; or
- A master's degree in a relevant discipline which includes a research thesis or project equivalent to at least 25 percent of one year of full-time study, with a minimum overall average grade of honours equivalent to the Second Class Honours Division A; or
- A qualification, or combination of qualifications and relevant professional experience, deemed equivalent by the GRC (or delegate).
- Meet the English language requirements of the University.

4 The Monash College Diploma Part 2 entry requirements published in this guide are for students commencing their undergraduate destination degree in 2026.

5 Please refer to **priorstudy.monash.edu/prior-study/** for the full entry score.

Δ To be assessed based on case-by-case basis

Entry requirements are subject to change. Please refer to **monash.edu.my** for the latest updates.

MONASH University

MALAYSIA

CONTACT US

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Monday to Friday 9.00am – 5.00pm

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MonashMalaysia

The information in this brochure was correct at the time of publication November 2025). Monash University Malaysia reserves the right to alter this information should the need arise.

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